

REMARKS

Applicant respectfully requests reconsideration of this application as amended. Claims 1-23 and 25-29 are currently pending in this application. Claims 1, 16, 23, 26 and 28 have been amended.

Drawings

The drawings have been objected to under 37 C.F.R. 1.83(a). The applicant respectfully disagrees. The Office Action is making an assumption that different operations must occur at different stations. The claims and specification are not limited to singular operations occurring at respective, singular stations. Regardless of the objection, claim 23 has been amended to include a separate station for removing the carrier. Claim 26 has also been amended to form vias after detachment of the carrier. Applicant notes that 'bottom' and 'top' are relative terms to show uses on opposite sides of the functional layer. This is shown in figure 12B, where the functional blocks are attached on one side and vias are formed on the other side. The amendments are solely made for expediting prosecution of the application.

Claim Rejections - 35 U.S.C. §103(a)

Claims 28-29 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nam in view of Smith. Applicant respectfully disagrees.

The combination does not teach a relocating tool with a first plurality of receptor sites, at least one of which is recessed within the tool. Nam, and thus the combination, teaches a flat table 56 with a wafer 70 placed thereon. This is plainly evident in figure 4 of Nam. It is not logical to assume that placing a plurality of dies (e.g. a wafer) will transform a flat table into a tool possessing a plurality of receptor sites, at least one of which is recessed within the tool. Removing the wafer will result in the table still being flat. The table 56 lacks the physical attributes required by applicant's claim limitations.

While Smith teaches such receptor sites, there is no teaching in Smith to remove blocks, after being deposited in receptor sites, from the substrate holding the blocks in the sites.

The Office Action cites that the motivation to combine would have been to improve the functional alignment of the functional blocks on the relocation tool (Col. 10, lines 47-57). The applicant does not agree, as Nam already shows the dies arranged in an aligned wafer 70, see figure 4, and does not require any additional alignment. Additionally the claim language does not require the functional blocks to be arranged in a specified manner. Therefore the Office Action does not cite a proper motivation to combine the references.

The applicant has also amended some of the independent claims to require a moving mechanism to move the relocating tool from a fluidic environment to another environment. Support for the amendment may be found throughout the specification and figures, including for example paragraphs 44 and 51 and figure 2A of the application. There is no such movement in Nam. Nam's wafer was not created in a fluidic self assembly process, and hence there is no such movement.

In light of the foregoing arguments applicant believes that claims 28-29 are patentable over Nam in view of Smith, and respectfully requests the Examiner to withdraw the rejection under 35 U.S.C. 103(a).

Claims 1, 3, and 6-17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nam in view of Bayan and Smith. Applicant respectfully disagrees.

The applicant believes the argument above applies to this rejection as well. Nam, and therefore the combination, does not teach a relocating tool with the required claim limitations. The combination also does not teach the amended claims. Applicant also believes the Office Action is arbitrarily applying claim definitions, and that no proper motivation to combine has been presented.

Nam as noted above, does not describe a relocating tool which includes a recessed region to receive a functional block. Moreover, Nam does not describe a moving mechanism which

moves the relocating tool from a fluid self assembly environment to another environment. Bayan also does not describe these features of the claims. While Smith does describe a fluidic self assembly process which includes a recessed region to receive a functional block, Smith does not describe removal of the blocks, after they are deposited in the receptor sites, from the receptor sites. Hence, the combination fails to present a prima facie case for obviousness.

In light of the foregoing arguments applicant believes that claims 1, 3, and 6-17 are patentable over Nam in view of Bayan and Smith, and respectfully requests the Examiner to withdraw the rejection under 35 U.S.C. 103(a).

Claims 1, 9, 12, and 16-22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Jin in view of Bayan and Smith. Applicant respectfully disagrees.

Jin teaches a wafer 50. The Office Action has made a similar argument (that a wafer is a relocating tool with a plurality of receptor sites) as to the Nam combination above. The applicant believes that no one commonly skilled in the art would make such an interpretation. A wafer is commonly known as a grid of dice. The wafer also does not possess receptor sites. Once a die is removed, another is not placed in the vacated spot. Each die is continually removed until there is no useable wafer left. This is well known in the art. Therefore applicant believes that the rejection set forth is unreasonable, given the overly broad interpretation of the claim language. The combination also does not teach the amended claims.

In light of the foregoing arguments applicant believes that claims 1, 9, 12, and 16-22 are patentable over Jin in view of Bayan and Smith, and respectfully requests the Examiner to withdraw the rejection under 35 U.S.C. 103(a).

Claim 2 was rejected under 35 U.S.C. 103(a) as being unpatentable over Nam in view of Bayan and Smith as applied to claims 1, 3, and 6-17 above, and further in view of Higashi. Applicant respectfully disagrees.

The applicant believes the argument above applies to this rejection as well. Nam, and therefore the combination, does not teach a relocating tool with the required claim limitations.

The combination also does not teach the amended claims. Applicant also believes the Office Action is arbitrarily applying claim definitions, and that no proper motivation to combine has been presented.

In light of the foregoing arguments applicant believes that claim 2 is patentable over Nam in view of Bayan and Smith, as applied to claims 1, 3, and 6-17 above, and further in view of Higashi, and respectfully requests the Examiner to withdraw the rejection under 35 U.S.C. 103(a).

Claims 4-5 were rejected under 35 U.S.C. 103(a) as being unpatentable over Nam in view of Bayan and Smith as applied to claims 1, 3, and 6-17 above, and further in view of Langari. Applicant respectfully disagrees.

The applicant believes the argument above applies to this rejection as well. Nam, and therefore the combination, does not teach a relocating tool with the required claim limitations. The combination also does not teach the amended claims. Applicant also believes the Office Action is arbitrarily applying claim definitions, and that no proper motivation to combine has been presented.

In light of the foregoing arguments applicant believes that claims 4-5 are patentable over Nam in view of Bayan and Smith, as applied to claims 1, 3, and 6-17 above, and further in view of Langari, and respectfully requests the Examiner to withdraw the rejection under 35 U.S.C. 103(a).

Claims 23 and 25-27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Jin in view of Bayan and Yanagisawa. Applicant respectfully disagrees.

The applicant believes the argument above applies to this rejection as well. The combination also does not teach the amended claims.

In light of the foregoing arguments applicant believes that claims 23 and 25-27 are patentable over Jin in view of Bayan and Yanagisawa, and respectfully requests the Examiner to withdraw the rejection under 35 U.S.C. 103(a).

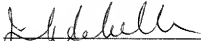
Applicant respectfully submits that in view of the amendments and arguments set forth herein, the applicable rejections have been overcome.

Please charge any shortages and credit any overcharges to our Deposit Account No. 02-2666.

Respectfully submitted,

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